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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/576,560	11/06/2006	Olle Hemmingson	1000500-000385	3806
21839 7590 11/03/2009 BUCHANAN, INGERSOLL & ROONEY PC POST OFFICE BOX 1404 ALEXANDRIA, VA 22313-1404				
EXAMINER				
PATEL, BHARAT C				
ART UNIT		PAPER NUMBER		
3724				
NOTIFICATION DATE		DELIVERY MODE		
11/03/2009		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ADIPFDD@bipc.com

### Office Action Summary

**Application No.**

10/576,560

**Applicant(s)**

HEMMINGSON, OLLE

**Examiner**

BHARAT C. PATEL

**Art Unit**

3724

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 31 August 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,2 and 4-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 4-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 April 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB-08)  
Paper No(s)/Mail Date \_\_\_\_\_

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 9/8/09 has been entered.

***Drawings***

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "a corresponding chain groove is formed in the disk for each saw chain for a disk with several saw chains that run parallel" per claim 10 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for

consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claim 10 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The Applicant has not disclosed "for a disk with several saw chains that run parallel", as claimed in claim 10, in the specification and or drawings. It appears that the Applicant is meaning the saw chains to be as driving links. However, the driving links can not be considered as running parallel as they are running in circular path. Therefore, the Examiner considers that a written description of the invention of claim 10 is not in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to

make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claim 10 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 10, the Applicant recites "a corresponding chain groove is formed in the disk for each saw chain" is confusing. There is only one saw chain for a disk per Figs. 1-8. It appears that the Applicant is meaning the saw chains to be as driving links. However, the pre-ambles sentence of "for a disk with several saw chains that run parallel" leads to more confusion in clearly understanding the Applicant's invention. Therefore, the Examiner considers that the Applicant fails to particularly point out and distinctly claim the subject matter which the applicant regards as his invention

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-2, 4-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carlton 5,048,389 in view of Frederickson 3,189,064.

Re claim 1, Carlton teaches disc saw blade 60 with a saw chain 76 mounted around the circumference of a circular disk 70, the saw chain 76 is provided with

driving links 78, connecting links 80 and cutting links 82, wherein the chain 76 is guided by means of the driving links 78 in at least one chain groove. It should be noted that the groove is formed by plates 66, 68, and disc 72 per Fig.4 as explained in col. 3, lines 43-46. Carlton also teaches that the chain 76 is arranged around the periphery of the disk 70, against the bottom 74 of the groove, a projecting part 78a of each driving link that projects radially inwards can make contact, in that the bottom 74 of the groove has radial projections 86 distributed around the circumference and the driving link has a cam surface 88 on the part 78a that projects radially inwards for interaction with the respective radial projection 86, and in that the chain 76 when driven, moves from a neutral position, in which the chain is loosely mounted around the circumference of the disk 70 and the projecting part 78a of the respective driving link 78 is loosely inserted between two adjacent radial projections 86, to a working position, in which the chain is tensioned around the circumference of the disk 70 and the cam surface 88 on the respective driving link is in contact with the associated radial projection 86 per Fig. 5; wherein the length of the saw chain 76 is matched to the radius ( $R_o$ ) of the disk 70, so that with the saw chain 76 and the disk 70 is arranged concentrically in the neutral position, a radius ( $R_{id}$ ) to the projecting part 78a (bottom portion) of each driving link 78 is larger than a radius ( $R_{sb}$ ) to the bottom of the groove 74 and less than a radius ( $R_u$ ) to each projection 86 per modified Fig. 5 shown above. It should be noted that the equivalent markings of the radii is performed to clarify the understanding of relationship amongst various radii. As 78a portion of the driving link fits into the gulley area 74 of the disc 70, it is apparent and inherent that area of the portion 78a is smaller. Hence, the

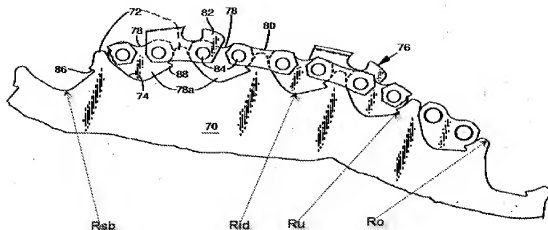
Rid, distance of the bottom portion of 78a to the center of the disc 70, is greater than the (Rsb), the distance of the bottom (valley) portion of the gulley 74 with respect to the center of the disc 70. However, Carlton fails to teach that the saw chain is loosely mounted on the disc to provide play in the circumferential direction of the disc, and wherein a radius (Rsb) to the bottom of the groove of each driving link is shorter than a radius (Rid) to the projecting part measured along the same radial line as said radius (Rsb) and shorter than a radius (Ru) to a radially outer end of each projection.

Frederickson teaches that the saw chain is loosely mounted on the disc 14 to provide play in the circumferential direction of the disc, and wherein a radius (Rsb) to the bottom of the groove of each driving link 10-11 is shorter than a radius (Rid) to the projecting part (as teeth of the sprocket per Fig. 4) measured along the same radial line as said radius (Rsb) and shorter than a radius (Ru) to a radially outer end of each projection.

It would have been obvious to one having ordinary skill in the art at the time of invention to provide Carlton's saw chain with a contoured drive link surface, as taught by Frederickson, in order to engage with the tooth of the sprocket to effectively drive the cutting edge mounted on the chain per col. 1, lines 67-72 and per col. 2, lines 23-33.

Re claim 2, Carlton teaches that the cam surface 88 on each driving link 78 is designed to press the chain 76 radially outwards against the radial projection 86 by the cam effect, in such a way that, in a tensioned state, the chain is held onto the disk 70 as a result of its shape per Fig. 5 and per col. 4, lines 3-36.

FIG. 5



It should also be noted that Frederickson teaches that drive link or tang 11 are adapted to be engaged in pockets 13 formed between the teeth of a driving sprocket 14, the teeth of which drive the projections per Fig. 4 per col. 2, lines 27-33. This

Re claim 4, Carlton teaches that the bottom 74 of the groove has a predetermined number of projections 86 distributed evenly around the circumference of the disk 70 per Fig. 5.

Re claim 5, Carlton teaches that the bottom 74 of the groove has one projection 86 for each driving link 78 per Fig. 5.

Re claim 6, Carlton teaches that radial cross-section of each projection 86 is lug shaped per Fig. 5.

Re claim 7, Carlton teaches that radial cross-section of each projection 86 is pyramid shaped per Fig. 5.



Re claim 8, Carlton teaches that radial cross-section of each projection 86 is dome shaped per Fig. 5.

Re claim 9, Carlton teaches that radial cross-section of each projection 86 is designed as a truncated cone that has a complementary shape to the cam surface 78a of the interacting driving link 78 per Fig. 5.

Re claim 11, Carlton teaches that the construction of the chain 76 is such that the connecting links 80 are spaced radially outwardly with respect to radially outermost portions of the radial projections 86 when the chain is in the neutral position, and when the chain is being driven per Fig. 5.

9. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Carlton in view of Frederickson 3,189,064, and further in view of Bueneman 2,958,348.

Re claim 10, as best understood, Carlton teaches that, for a disk with several saw chains that run parallel, corresponding chain grooves are formed in the disk for receiving respective saw chains. Bueneman teaches that, for a disk with several saw chains that run parallel, corresponding chain grooves are formed in the disk for receiving saw chains per col. 1, lines 19-29.

It would have been obvious to one having ordinary skill in the art at the time of invention to provide Carlton's saw blade disk with gang type structure including multiple chain grooves, as taught by Bueneman, in order to provide multiple cuts simultaneously.

Furthermore, it would have been obvious to one having ordinary skill in the art at the time of invention was made to provide multiple disks to form a disk as a gang of multiple disks, since it is well known in the art as to use multiple disks to produce

multiple cuts in order to improve productivity, since it has also been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis paper Co. V. Bemis Co.*, 193 USPQ 8.

### ***Response to Arguments***

10. Applicant's arguments with respect to claim 1-9, and 11 have been considered but are moot in view of the new ground(s) of rejection over Carlton 5,048,389 in view of Frederickson 3,189,064. Claim 10 is rejected under 35 U.S.C. 112, first paragraph and second paragraph as discussed above.

### ***Conclusion***

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Ackley (2725083), Ehlen (3269431) and Harfst (6748840) teach various types of saw chain and drive mechanism showing looseness in neutral position.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to BHARAT C. PATEL whose telephone number is (571)270-3078. The examiner can normally be reached on Monday-Friday, alt. Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Boyer Ashley can be reached on 24502. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Bharat C Patel/  
Examiner, Art Unit 3724  
October 22, 2009.

/Ghassem Alie/  
Primary Examiner, Art Unit 3724